

request for a change of inventorship in view of the cancellation of these claims. The remaining inventors are Edward F. Tokas and Ken C. Caster.

Claims 53, 54, 58, 59, 60-63, 65, 66-71, 75, 76 and 83 were rejected under 35 U.S.C. § 102(a) as anticipated by, or in the alternative, under 35 U.S.C. § 103(a) as obvious over the article of Weck et al. or the article of Bartz et al. Applicants respectfully traverse this rejection since neither of these articles is prior art to the present application. Applicants have submitted herewith a Declaration Under 37 C.F.R. § 1.131 setting forth the facts of their prior reduction to practice to overcome the cited publications. The declaration and attached exhibits illustrate the reduction to practice of the claimed invention prior to the earliest publication date of either the Weck et al. or Bartz et al. articles. Applicants note that Exhibit C has been redacted only to eliminate extraneous information not necessary for the showing of reduction to practice. In view thereof, Applicants respectfully request that this rejection be withdrawn.

Claims 53-55, 58-63, 66 and 71-82 were rejected under 35 U.S.C. § 102(b) as being anticipated by EP 424,833. Applicants respectfully traverse this rejection.

The present invention is directed to a method for providing a coating on a substrate surface comprising providing a catalyst at the substrate surface and contacting the catalyst on the substrate surface with a material that undergoes a metathesis reaction to form a coating on the substrate surface. As provided in the specification at page 6, the term "coating" includes a coating that is intended to be the final or outer coating on a substrate surface and a coating that is intended to be a primer for a subsequent coating. This coating method is distinguished from bulk metathesis polymerization, particularly reaction injection molding. *Specification, page 7, lines 1-15*. According to the present invention, the resulting metathesis polymer forms a filmogenic adhesive or coating rather than a molded article as in reaction injection molding.

EP 424 833 relates to the production of a molded product by use of a substrate coated with a metathesis catalyst. The term "substrate" is used in the '833 publication to

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mean reinforcing agents such as minerals or fibers such as aramid, graphite, polyethylene, vegetable, glass and the like or filler materials such as calcium carbonate, talc, clays, carbon black and the like. The substrate having a metathesis catalyst component on its surface is introduced into a mold, a monomer mixture containing at least one norbornene-type monomer is introduced into the mold and the norbornene monomer is allowed to polymerize by ring opening to form a thermoset polynorbornene type product. Thus, the substrate coated with catalyst is used as a delivery method for providing the catalyst in a traditional reaction injection molding process. The resulting product is a solidified fiber reinforced plaque (Examples 1-2). As pointed out in Example 5 of the '833 publication, the polymer obtained from the mold took the form of a hard mass in which the chopped glass fiber strands were firmly embedded.

Thus, the result of the method taught by the '833 publication is a molded article with fibers inside. The present invention provides substrates with a coating on the substrate such that the coatings are intended to be the final or outer coating on a substrate surface or a coating that is intended to be a primer for a subsequent coating. The rejected claims and the specification distinguish over the type of molded article taught by the '833 publication.

In order to find anticipation, each and every element of the claim must be found in the cited publication. EP '833 does not teach each and every element of the rejected claims. First, independent claim 53 sets forth a method for providing a coating as taught in the specification and discussed above. EP '833 teaches coating a catalyst on a fiber but does not remotely teach contacting the catalyst on the substrate surface with a material that undergoes a metathesis reaction to form a coating on the substrate surface. The fibers of the '833 publication are merely carriers for the catalyst and provide reinforcement to the polymerized molded article.

Second, claims 58 and 59 are directed to the method of the invention wherein the metathesis reaction step or both the providing the catalyst and the metathesis reaction step are conducted at room temperature. EP '833 provides eight examples and shows heating

during the metathesis reaction step in all eight. Moreover, in example 8, the polymerization was attempted at room temperature but was not carried out until heat was introduced. Thus, this element of claims 58 and 59 are not found in the '833 publication. Likewise, each element of claim 71 is not found in the EP publication since claim 71 is directed to a method wherein the catalyst can initiate polymerization of the metathesizable material upon contact at room temperature.

Claim 55 is directed to a method wherein the coating has a thickness that is less than the thickness of the substrate. EP '833 does not teach the elements of claim 55 since the fibers of the molded article taught by EP '833 do not have coatings on them individually and are rather embedded in the molded article.

Claim 63 is directed to a method wherein the catalyst is included as a component of the substrate. As pointed out in the specification, the catalyst in the method of the invention, may be mixed in bulk with the substrate material. One method for making such a catalyst-containing substrate is to mix the catalyst in bulk with the substrate material and then forming the resulting mixture into the substrate article via molding, extrusion and the like. EP '833 does not teach including the catalyst in the reinforcing fibers described. Rather, the whole point of EP '833 is to *coat* the fibers with catalyst in order to provide the catalyst for use in reaction injection molding. Thus, the teachings of EP '833 do not provide this element of claim 63.

As provided in detail above, each of the claims rejected as anticipated over EP '833 contains one or more elements not disclosed in that publication. Thus, the claims cannot be anticipated by that publication. In view thereof, Applicants respectfully request that this rejection be withdrawn.

Claims 53-83, 93, 94, 96 and 98 were rejected under 35 U.S.C. § 103(a) as being unpatentable over EP 424,833. Applicants respectfully traverse this rejection.

As described above, EP '833 is directed to a completely different system than that of the rejected claims. EP '833 teaches the use of reaction injection molding to form polymerized products. The present claims are directed to coated substrates. EP '833 uses reinforcing materials or fillers coated with catalysts to provide the necessary catalyst in the reaction injection molding system. This method of delivering the catalyst to the system is used to eliminate the need for a separate monomer stream containing the catalyst or cocatalyst as well as the need to mix the catalyst stream with the cocatalyst stream before injecting the mixed streams into the mold. *EP '833, page 3, lines 6-8*. Applicants' invention is a method that provides a resulting metathesis polymer which forms a filmogenic adhesive or coating rather than a molded article. Thus, the product of the present invention is a coated substrate. The product of the method of EP '833 is a molded article reinforced with reinforcing material or filler. As pointed out in the background section of the '833 publication, reinforcing agents or fillers increase a polymer's flexural modulus with only a small sacrifice in impact resistance and may decrease shrinkage of the molded product. *Page 1, lines 17-22*. These properties are not relevant to the method of coating articles claimed in rejected claims. Moreover, the catalysts claimed in the present application are different from those of EP '833.

Since EP '833 is directed to a completely different product and method for producing it, the teachings therein would not have made the claimed invention obvious to one of ordinary skill in the art. EP '833 does not teach or suggest the coating of a substrate by the method claimed. Therefore, Applicants respectfully request that this rejection be withdrawn.

Claims 53-83, 93, 94, 96 and 98 were rejected under 35 U.S.C. § 103(a) as being unpatentable over WO 97/38036 taken in view of EP 424,833 and optionally the articles of Weck et al. and Bartz et al. Applicants respectfully traverse this rejection.

WO 97/38036 is directed to particular metathesis catalyst mixtures which may be used in conjunction with a metathesizable monomer. As noted in the Office Action, the '036 publication only teaches the use of the catalyst in a mixture with the monomer and does not suggest that these elements could be used separately. While coatings are discussed, such

would not provide the advantages of those of the present invention such as the ability to catalyst-coat a substrate in advance of the application of metathesizable monomer. Rather the WO '036 publication teaches away from this advantage since the monomer is taught to be mixed with catalyst prior to application.

EP '833 only teaches use of metathesis reactions to obtain molded products. This publication does not discuss coatings as claimed in the rejected claims; rather the only coatings discussed are the catalyst coatings on the reinforcing or filler materials.

To support a conclusion of obviousness, the prior art must suggest the desirability of making the claimed invention, i.e., provide a teaching or suggestion to one of ordinary skill in the art to have made the changes that would have produced the claimed subject matter. *Ryco Mfg. Co. v. Nu-Star, Inc.*, 950 F.2d 714, 718 (Fed. Cir. 1991). Moreover, when combining references, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art to modify the reference or to combine reference teachings. *MPEP* § 2142. Such motivation to combine EP '833 and WO '036 is not found in either publication. EP '833 eliminates the need for a separate stream into the mold during reaction injection molding by coating the catalyst onto a reinforcing or filler material already desired to provide particular properties to the resulting polymerized product. WO '036 teaches coating a mixture of catalyst and metathesizable monomer directly onto a substrate. There is no suggestion that such a process should be improved since no disadvantage is discussed. Moreover, if one of skill in the art wanted to improve such a coating method, the teachings of EP '833 would not have been reviewed since the teachings therein are directed solely to obtaining an injection molded product.

Since there is no motivation to combine EP '833 with WO '036, a *prima facie* case of obviousness has not been made; it would not have been obvious to one of skill in the art to perform the claimed method. In view thereof, Applicants respectfully request that this rejection be withdrawn.

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Applicants believe they have responded to all matters raised in the above referenced Office Action and that the application is now in condition for allowance. If the Examiner has any questions concerning this Application or this Amendment, the Examiner is invited to contact the undersigned.

Respectfully submitted,

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